



WebDASC: a web-based dietary assessment software for 8-11-year-old Danish children

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Abstract for ICDAM 8:

Topic: Novel approaches to measuring diet

Title: WebDASC: A Web-based Dietary Assessment Software for 8-11 year old Danish Children

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Background/Aim: When we rely on children's self-report to obtain information about dietary intake, the assessment tools we use should foster participants' cooperativeness by being intuitive, easy and fast to complete, flexible in the choices it offers, non-intrusive, engaging, and age-appropriate. The challenge is to engage children in the process and to obtain accurate report while minimizing respondent bias. The aim of this study was to develop and evaluate a Web-based Dietary Assessment Software for Children (WebDASC) created as part of the OPUS¹ project ("Optimal well-being, development and health for Danish children through a healthy New Nordic Diet") to measure dietary change after a school-based intervention.

Methods: WebDASC is a self-administered tool that can be used by 8-11 year old children with or without parent's aid. The development of WebDASC followed a prototyping approach: focus groups, informal interviews, literature review, and usability tests preceded its release. Special consideration was given to age-appropriate design issues, e.g. the avatar is an animated armadillo who guides respondents through six daily eating occasions and helps them report foods and beverages previously consumed; the report of amount consumed is aided by food photography: children are prompted to select the best match among four digital images depicting child-appropriate portion sizes. WebDASC is powered by a database of 1300 food list items based on food intakes from the Danish National Survey of Diet and Physical Activity among children. A type-in format is also available for foods that children are unable to find by either category browse or text search. Respondent's acceptability was measured by a qualitative questionnaire administered to eighty one 8-11 year old participants in the OPUS pilot study who had completed seven consecutive days of dietary assessment using the WebDASC.

Results: 74 participants returned the qualitative questionnaire. 95 % of the children received more or less help from parents to complete WebDASC. 80% found the recording duration acceptable. 88% found the task of finding and reporting foods more or less easy. Children preferred the category browse search, whereas parents preferred the free text search. 85% found the digital images to estimate portion sizes more or less easy to use. 98% liked the user interface design. Open answers indicated that the flexibility could be improved.

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Conclusion: Qualitative testing demonstrated that WebDASC was well accepted among children and their parents.

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